Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is used so as to transfer rotating power from a prime mover, like for example an internal combustion engine or an electrical motor, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter could provide the equivalent of a reduction gear by being able to multiply torque when there is a substantial difference between output and input rotational speed.

The fluid coupling unit is the most popular type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs utilized for always changeable transmissions which could multiply torque. Like for example, the Variomatic is one kind that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an additional part which is the stator. This alters the drive's characteristics through occasions of high slippage and produces an increase in torque output.

In a torque converter, there are at least of three rotating parts: the turbine, in order to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be stopped from rotating under any situation and this is where the term stator originates from. In reality, the stator is mounted on an overrunning clutch. This particular design prevents the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

Alterations to the basic three element design have been integrated at times. These adjustments have proven worthy particularly in application where higher than normal torque multiplication is required. Usually, these alterations have taken the form of various turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Several examples comprise the Dynaflow that utilizes a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters comprise a lock-up clutch to be able to lessen heat and in order to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.